

## **California Influenza and Other Respiratory Disease Surveillance for Week 48 (November 27-December 3, 2011)**

Note: This report includes data from many different sources of influenza surveillance, including syndromic surveillance, laboratory surveillance, and mandatory reporting of influenza deaths for cases ages 0-64 years. The information contained in this report should be viewed as a “snapshot” of influenza activity for each surveillance week, and should not be considered as population-based data or representative of all California public health jurisdictions.

**Based on low levels of influenza-like illness and laboratory detections, overall influenza activity in California for Week 48 remained “sporadic\*.”**

### **Influenza Report Highlights**

- Circulation of a novel swine-origin triple reassortant H3N2 influenza (S-OtrH3N2) virus has been reported in four states, including Pennsylvania, Indiana, Maine, and Iowa. Of the ten reported cases, all except one have been children; two had underlying chronic medical illness and were briefly hospitalized. While almost all have had either direct or indirect exposure to swine, investigation of a recently reported influenza-like illness (ILI) cluster of three children in Iowa has suggested limited person-to-person transmission.
- All of the cases were identified by routine influenza surveillance and testing at a state public health laboratory. In California, the Respiratory Laboratory Network (RLN) provides the state’s front-line for testing for influenza. All RLN laboratories are able to screen for the S-OtrH3N2 influenza virus; to date, the S-OtrH3N2 virus has not been identified in California, but testing has been limited due to the low number of influenza specimens submitted to RLN laboratories. RLN laboratories are encouraged to work with the California Department of Public Health Viral and Rickettsial Disease Laboratory (CDPH-VRDL) and their local partners to perform broad influenza testing in different populations to monitor for the emergence of the S-OtrH3N2 virus in California.
- Influenza activity remains low in California.
- Outpatient ILI activity as a percentage of total visits to sentinel providers was low (1.1%).
- Of 1,012 specimens tested by the RLN and sentinel laboratories during Week 48, 4 (0.4%) were positive for influenza B and 8 (0.8%) were positive for influenza A; 1 (12.5%) influenza A specimen was subtyped as A (H3).
- The CDPH-VRDL has not tested any specimens for antiviral resistance to date.
- One specimen from a California resident has been strain-typed as A/Perth/16/2009-like, the influenza A (H3N2) component of the 2011-12 influenza vaccine for the Northern Hemisphere.
- CDPH has received no reports of laboratory-confirmed influenza-associated deaths among persons less than 65 years of age.

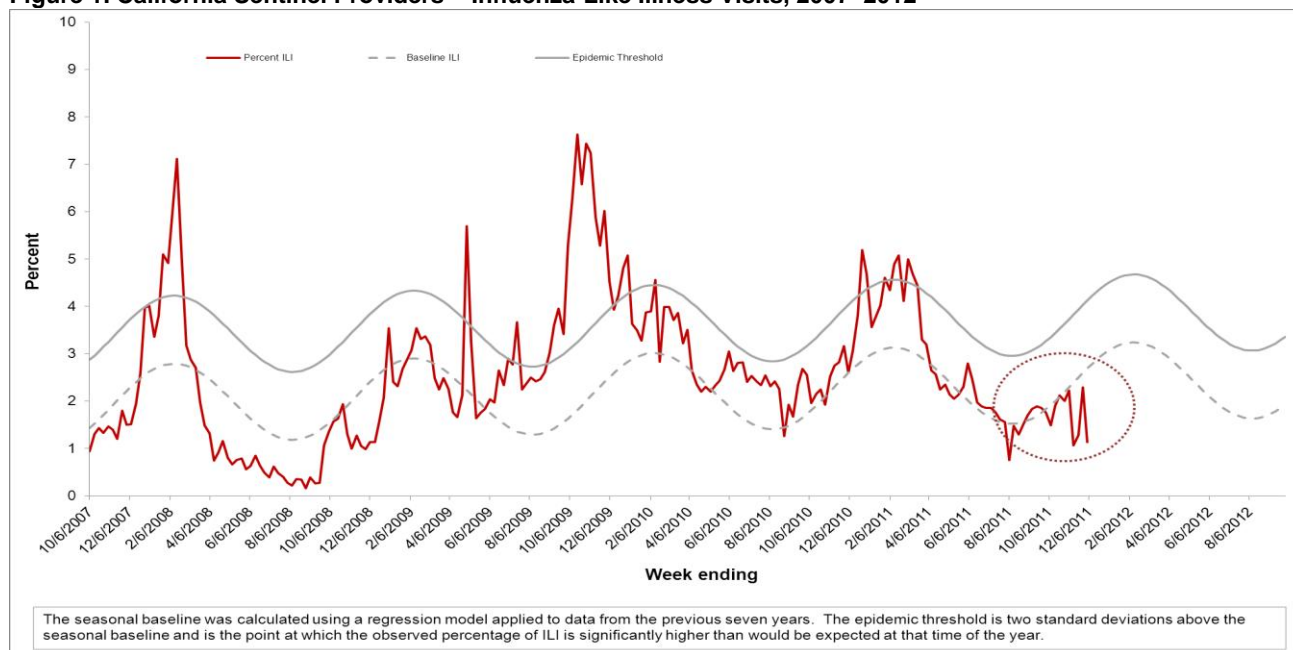
### **A. Syndromic Surveillance Update**

#### **1. CDC Influenza Sentinel Providers**

Sentinel providers (physicians, nurse practitioners, and physician assistants) situated throughout California report the number of outpatient visits for ILI and the total number of visits per week. ILI is defined as any illness with fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat in the absence of a known cause other than influenza. Data are reported weekly as a percentage of total visits. At present, over 200 sentinel providers have indicated their willingness to report ILI data and submit specimens to CDPH-VRDL for further testing this season, allowing CDPH to attain the CDC goal of 1 sentinel provider per 250,000 population.

A total of 80 (38.6%) out of 207 enrolled sentinel providers have reported Week 48 data. Based on available data, the percentage of ILI visits (1.1%) remained below baseline (Figure 1).

**Figure 1. California Sentinel Providers – Influenza-Like Illness Visits, 2007–2012**



## 2. Kaiser Permanente Hospitalization Data (“Flu Admissions”)

“Flu Admissions” are defined as a diagnosis of “flu,” “pneumonia,” or “influenza” recorded in text fields at time of admission to the hospital. Influenza activity is tracked by dividing the number of “Flu Admissions” by the total number of hospital admissions for the same day to obtain a percentage of pneumonia and influenza (P&I) admissions.

During Week 48, the percentage of Kaiser hospitalizations for P&I increased in northern California (5.6%, compared to 5.2% in Week 47), and decreased slightly in southern California (4.8%, compared to 4.9% in Week 47).

## B. Laboratory Update

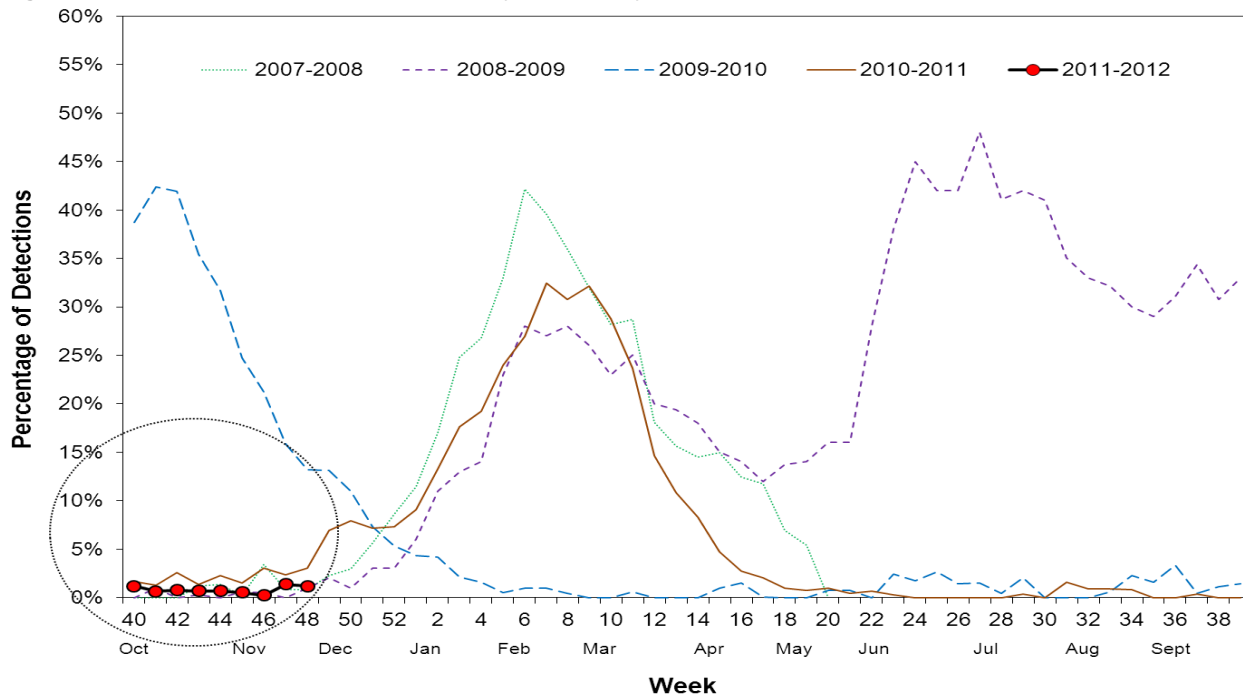
### 1. Respiratory Laboratory Network (RLN) and Sentinel Laboratory Surveillance Results

The RLN is composed of 29 local public health laboratories that offer PCR testing for influenza A and B. Sentinel laboratories are a network of clinical, commercial, academic, and hospital laboratories located throughout California that provide weekly data on the number of laboratory-confirmed influenza and other respiratory virus detections and isolations. These laboratories use various testing methods, including rapid test, direct fluorescent assay, viral culture, and PCR.

The percentage of influenza detections in the RLN and sentinel laboratories remained low (1.2%) during Week 48 (Figure 2). Of 1,012 specimens tested by the RLN and sentinel laboratories, 4 (0.4%) were positive for influenza B and 8 (0.8%) were positive for influenza A; 1 influenza A specimen was subtyped as A (H3). The influenza-positive specimens were reported in Contra Costa, Los Angeles, Madera, Placer, Sacramento, San Diego, San Francisco, and Solano counties.

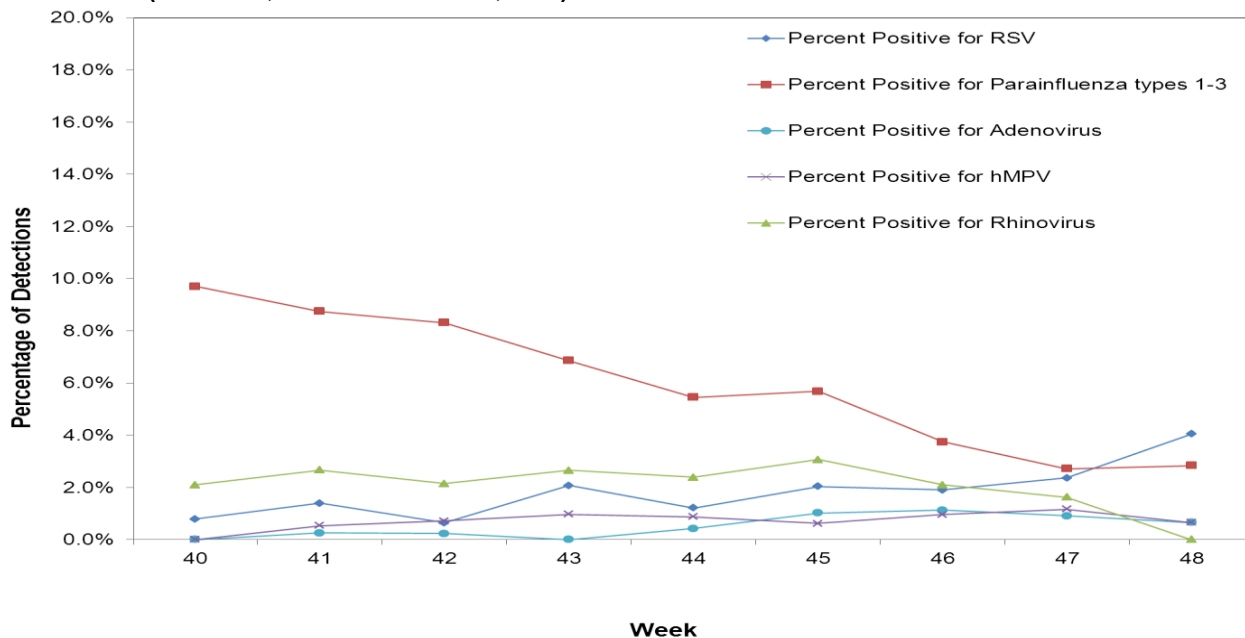
To date for the 2011-2012 season, of the 39 influenza A detections, 2 (5.1%) have been subtyped as A (2009 H1N1) and 7 (17.9%) have been subtyped as seasonal A (H3).

**Figure 2. Influenza Detections in Respiratory Laboratory Network and Sentinel Laboratories, 2007–2012**



Sentinel laboratories reported continued circulation of parainfluenza virus in both northern and southern California, but in decreasing proportion compared to previous weeks (Figure 3). Additionally, there was an increase in detections of respiratory syncytial virus (RSV) during Week 48 (4.0%, compared to 2.4% in Week 47).

**Figure 3. Other Respiratory Pathogen Detections in Respiratory Laboratory Network and Sentinel Laboratories, Weeks 40-48 (October 2, 2011 – December 3, 2011)**



## 2. Antiviral Resistance Testing

CDPH-VRDL has not tested any influenza specimens during the 2011-2012 influenza season.

### 3. Influenza Virus Strain Characterization

The CDPH-VRDL, as part of the CDC-WHO regional laboratory network, has the capacity to perform antigenic characterization (strain-typing) on select circulating influenza strains based on type/subtype, geographic area, demographics, and case definition. However, because strain-typing requires the culture of viruses at high titers and the use of a broad panel of antisera, most antigenic characterization is conducted at the CDC. Upon special request, the VRDL can expedite strain-typing on a limited number of samples using a smaller panel of antisera.

One California specimen has been strain-typed to date during the 2011-2012 influenza season as A/Perth/16/2009-like (H3N2); this strain is covered by the 2011-2012 vaccine for the Northern Hemisphere.

### **C. Laboratory-confirmed Case Reports**

Currently, as mandated under Section 2500 of the California Code of Regulations, deaths among cases age 0-64 years with laboratory-confirmed influenza are reportable to CDPH.

CDPH has received no reports of influenza-associated deaths among persons less than 65 years of age to date this season.

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For questions regarding influenza surveillance and reporting in California, please email [InfluenzaSurveillance@cdph.ca.gov](mailto:InfluenzaSurveillance@cdph.ca.gov). This account is monitored daily by several epidemiologists.

To obtain additional information regarding influenza, please visit the CDPH influenza website at [http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza\(Flu\).aspx](http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza(Flu).aspx).

A copy of the case report form for reporting any laboratory-confirmed influenza case that was either admitted to the ICU or died can be downloaded from [http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza\(Flu\).aspx](http://www.cdph.ca.gov/HealthInfo/discond/Pages/Influenza(Flu).aspx).